5.2B WS Name _____Date _____Per _____

To establish each identity, manipulate only one side of the equation. Label which identity type used.

1. $\sec^4\theta - \sec^2\theta = \tan^4\theta + tan^2\theta$

2. $3sin^2\theta + 4cos^2\theta = 3 + cos^2\theta$

3. $\frac{1-sin\propto}{cos\propto} + \frac{cos\propto}{1-sin\propto} = 2sec\propto$

4. $\frac{sin\propto+cos\propto}{sin\propto} - \frac{cos\propto-sin\propto}{cos\propto} = sec\propto csc\propto$

5. $\frac{1-2cos\theta+cos^2\theta}{sin^2\theta} = (csc\theta - cot\theta)^2$

6. $\frac{sin\theta cos\theta}{cos^2\theta - sin^2\theta} = \frac{tan\theta}{1-tan^2\theta}$

7. $\frac{cosx+sinx-sin^3x}{sinx} = cotx + cos^2x$

Bonus:

8. $\frac{(2cos^2\theta-1)^2}{cos^4\theta-sin^4\theta} = 1 - 2\sin^2\theta$

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